

together satisfactory, and the last one is somewhat complicated. (A much simpler method, and one that has been verified by numerous experiments on the cadaver, will be published by the reviewer (M. Schüller) in the *Deutsche Med. Wochenschr.*) Von Bergmann reports one case in which he successfully trephined a funnel-formed depression of the right temporal bone of some 3-4 cm. circumference. He takes the occasion to recommend, after removal of fragments of bone and careful antiseptic cleansing of the wound, the utmost possible cleanliness of the skin-margin of the wound above the trephined place. The cutaneous wound is closed over the opening, through which a drainage tube is laid upon the brain. * * *

The author adds to this case instructive remarks upon the phenomena of cerebral oedema, which occurred in the vicinity of the wound, and with this connects the paralysis of the left arm that appeared some hours after the operation, disappearing again in a few days, to which were added now and then contractions in the muscles supplied by the left facial nerve. From these symptoms Bergmann thinks that the spot of the cortical injury must be sought for in the anterior margin of the anterior central gyrus, where it borders the third frontal.

MENTAL SYMPTOMS FROM ISTHMUS DISEASE.—The conventional notion associates all mental disturbances with perversion of the functions of the cerebral hemispheres. This it would be a truism to speak of as a correct belief, but sufficient stress is not laid by modern writers on the fact that the converse, pathologically speaking, of this proposition is not of universal application, namely, that only hemispheric lesions are found where mental symptoms have been evinced during life. It is an old observation, but it has not been sufficiently commented on, that lesions of the pons, the crura, and thalami, are accompanied by obliteration, more or less complete, of consciousness, blurring of the perceptions, confusion in the intellectual sphere, and this in cases where the lesion was not one of such a character as to disturb neighbouring ganglia by pressure. Two explanations may be offered for this phenomenon. Either the vaso-motor centre for the cortical vessels must be assumed to be under the partial control of isthmus ganglia, and hence that isthmus lesions may by irritation or destruction of this centre excite or paralyze the vascular tubes of

certain cortical districts, or it must be concluded that the pathological interruption of the great nerve tracts involves a functional disturbance of cortical end stations. The former explanation would seem rather applicable to cases in which general and widespread mental disturbance, somnolence, excitement, or depression are found; the latter, to those where the disturbances are partial in character.

It is a well-known fact that if all the avenues of sensory perception are closed, unconsciousness in the way of sleep speedily follows. May not the interruption of the perception tracts be followed by corresponding phenomena of a less extensive nature, when occurring in the isthmus territory? That an irritative lesion in the line of the centripetal tracts can influence cortical life, is amply illustrated by cases of thalamus lesion, where hallucinations were present. Here the cause of the hallucination is in a lower centre, but from all, the belief is justified that the entry of the hallucination into the intellectual sphere can only take place in the cortical termination of that tract. From this point, through the conducting associating tracts, it becomes a part and parcel of the patient's Ego. The study of the pathology of the great nerve tracts has been limited of late almost exclusively to the middle and posterior thirds of the internal capsule. It seems to have been forgotten that Meynert traced an enormous division of the crus directly to the frontal lobe and the lenticular nucleus, and that this portion, through the transverse fibres of the pons was of necessity connected with the cerebellum, and that other functions are to be located in the cortex, than merely muscular innervation and visual and auditory perceptions, to whose study modern localizationists are directing their attention so exclusively. The restiform columns derived from spinal fibres enter the cerebellum, terminating chiefly in its hemispheres; the cortex of the hemispheres is connected by radiatory fibres with the dentated nucleus, which is a recipient of fibres of the auditory nerve. In short, the cortex of the cerebellar hemisphere receives fibres from the sensorial periphery of the body as well as the semicircular canals, and possibly of the cochlea.

From the primary reception area, the transverse fibres of the pons originate, and enter the crus; it is these which, according to Flechsig's most recent researches, enter the frontal lobe and lenticular nucleus. In no respect does man so much differ from the ape as in the quantitative development of this tract. It is intimately associated with the map of the frontal lobe. There is

every reason to consider it the channel of information of the equilibrium, and possibly of the senses of space and time, on which the scope of the mind is closely dependent. It is not at all improbable that lesions in these tracts may disturb these sensations, and that the entire mental architecture may totter with the withdrawal of so important pillars. Probably the congenital asymmetry of the peduncular tracts, observed in certain cases of mental perversion, may not be without a bearing in the explanation of the symptoms of those cases. And this explanation would be adjunct to the theory of mal-development of the associating tracts, recently advanced in explanation of other symptoms of these same states. The day will come when physiologists will not attempt any longer to determine the seat of higher functions in single centres by special experiments, but rather seek to correlate the results of different sets of experiments, and thus demonstrate that complex functions have a complex substratum. Nothing could be more absurd, for example, than to speak of "intellectual cells" (Denkzellen) in the cerebral cortex, as Schüle does in Ziemssen's Cyclopædia. Simple elements have simple functions, complex functions require a union of numerous simpler elements in a complex combination. (*Chicago Medical Review*, Sept. 20, 1881.)

AUTOGRAPHIC MEN.—Chouel (*Marseilles Médical*, January, 1881) reports a class of human beings whom he calls "autographic men," who, from certain central neuroses, present a form of urticaria which shows itself when a slight irritation is applied to the skin. The cuticle may be written on and retain the character inscribed on it for some time, through the urticaria so produced. Dujardin-Beaumetz was the first to describe this phenomenon, which is by no means rarely observed.—*Chicago Medical Review*, August 5, 1881.

ECLAMPSIA.—Masino (Lo Sperimentalista) has arrived at certain conclusions which, while not entirely new, contain a fair *résumé* of existing knowledge on the subject. He claims, first, that the pathogeny of eclampsia is still obscure, but that clinical observation is in accord with experimental physiology in demonstrating that the seat of this disease is in the medulla oblongata. Second, that the nature of these unknown alterations, whether they are of a toxic character or the results of reflex irritation, has yet not been settled. Third, the existence of sugar in the urine of eclamptic